

The effective action taken by the Board of Trustees of the City of Hanford to suppress spitters, should commend itself to the other cities of the State, particularly to San Francisco, Los Angeles, Sacramento, Oakland, and San Jose. The city fathers of Hanford have announced through press and poster that those who go hawking along the streets, voiding their rheum and spreading bacteria to the right and left, are not only ill-mannered but ill-producers.

Most cities, like Hanford, have ordinances declaring it to be a misdemeanor for any person to spit or expectorate on the floor of any public building or on any sidewalk within the city limits. Yet every hour of the day and far into the evening, you see a parade of spitters phlegm-flaming the public.

The danger of infection from the dust of sidewalks, streets and buildings is immeasurably increased by spitters; the hazards of shopping, theater and church-going are multiplied by sneezers and coughers that must have buried their manners as well as talents in an only handkerchief. It is time for them to purchase another one and use it.

The action of Hanford in keeping its sidewalks and public buildings clean from the saliva of the thoughtless and inconsiderate, besides being a splendid disease preventive measure, makes the city more attractive as well as sanitary. Public sentiment in Hanford is strongly behind the Board of Trustees, and the public sentiment of every community of California will uphold its officers in enforcing laws for the suppression of customs and the prevention of conditions that endanger public health. Competent health officers can appeal with confidence to the common sense of any community to support health measures for the common good.

BOTULISM.

Particular attention is directed to the special article in last month's JOURNAL on botulism by Dr. E. C. Dickson. This subject is of very timely importance because of the wide newspaper notoriety it is now receiving due to the number of outbreaks of the last few months in widely separated parts of the United States. Botulism has been recorded more frequently in California probably because more constant search has been made for it, although possibly because its incidence may be higher on the Pacific Coast.

Not only is botulism a form of meat poisoning, but it has arisen from the use of home canned products, both vegetables and fruits, in various parts of the country. Human cases from home-canned foods have recently been reported in New Jersey, Indiana and Idaho. Forage poisoning cases in animals have been reported in Kentucky and Illinois, all together indicating the wide distribution of bacilli botulinus.

Recent outbreaks from home and factory packed olives have attracted much attention, largely because of the wide publicity accorded them in the newspapers. Equally important and more numerous outbreaks have occurred on the Pacific Coast with only local interest aroused because they did not attract newspaper attention.

An interesting feature of this disease is the high incidence of limber-neck in chickens. Many instances are recorded where from a dozen to fifty were killed. Recently, at Saratoga, California, several hundred thoroughbred chickens were killed by eating discarded home-canned food. In this case representing a loss of several thousand dollars. The high incidence of forage poisoning in horses and mules is also attracting attention. Cases of forage poisoning have been reported in California and are now being investigated by the Department of Agriculture of the University of California. Investigation of botulism began on a large scale in 1913 as a result of a serious outbreak in a sorority house banquet at Stanford University. Since that time this investigation has been carried on in the laboratories of the Stanford University Medical School, and for the period of the war aid was given this research by the State Council of Defense. Important facts have been demonstrated as a result of these studies.

Bacillus botulinus may grow and produce virulent toxin in vegetables and fruits, whereas it was formerly considered to be a meat poisoning exclusively.

Bacillus botulinus is a not infrequent cause of spoilage in home-canned fruits, and frequent deaths have been caused by eating or tasting infected material which had not been heated after removing from can or jar. The toxin of bacillus botulinus is destroyed by heat, wherefore any food is safe if boiled before eaten. The spores of bacillus botulinus are much more resistant to heat than was formerly believed, and they will stand many of the disinfecting processes by which canned foods are supposed to be sterilized. It has been shown also that there are at least two strains of bacillus botulinus as tested by toxin-antitoxin experiments. The toxin of strain A is unaffected by the antitoxin of strain B, and vice versa. This is a matter of the highest importance in treatment where a polyvalent serum must be used. Mrs. Burke, working in the Stanford Laboratories, has shown that the organism may be recovered from nature, from bird-picked cherries, leaves of beans, etc.

Owing to the recognition of the importance of botulism as a type of food poisoning associated with canned foods, a sum of money has been raised by the olive growers and the canning industry for the intensive study of botulism in California. This investigation will be conducted in the laboratories of the Stanford University Medical School and the George W. Hooper Foundation of Medical Research of the University of California. It has the co-operation of the United States Public Health Service and the California State Board of Health.

This investigation will include a careful study of the distribution of the bacillus botulinus in food and the ways in which food material may become infected, and of the steps necessary to destroy the organism when it has infected raw material. It will also include studies of the pharmacology and therapeutics of botulism. A staff of specially trained workers have been engaged and it is expected that the work will require at least two years.